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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,166

09/30/2003

Max Rombouts

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10/31/2006

CLARK & BRODY

1090 VERMONT AVENUE, NW

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WASHINGTON, DC 20005

EXAMINER

LAZORCIK, JASON L

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,166

Applicant(s)

ROMBOUTS ET AL.

Examiner

Jason L. Lazorcik

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 September 2003 and 08 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 22-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/30/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3,4,and 6 all set forth limitations on the method by reciting a fraction of the "fabrication cycle" time. Since the "fabrication cycle" is dependent on the operators choice of operating parameters, the particular metes and bounds for which the applicant is seeking protection are rendered unclear and indefinite.

Claim 5 limits the time required to perform a "stroke" to less than half the time that would be taken by the blank to stretch the same length under its own weight. Since the viscous flow properties of a material are directly dependent upon both the material composition and the temperature, the particular metes and bounds of the present limitation are rendered indefinite

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 through 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Northup (US 4,276,073). Northup recites a method of forming a parison from a molten gob which is subsequently transferred into a blow mold, the parison being <75% of the height of said mold (Column 1, Lines 30-34). Once in the blow mold, the base of the parison is engaged by a vacuum plunger which protrudes into the mold and said parison is elongated by moving the plunger into a retracted position. It is understood that the disclosed plunger inherently varies its speed through the stretching process as set forth in claim 7 and that said plunger is capable of "adopting strokes of different lengths" (Figs 2-5). Northup further teaches that a positive pressure of air or "a cooling fluid" is forced into the plunger after drawing the parison (column 4, Lines 29-30). The elongated parison is subsequently inflated by either positive pressure or vacuum (Column 3, Lines 38-53) into the final hollow glass article. Finally, the reference discloses that "a plurality of blow molds are associated with each blank" (Column 1, Lines 61-65) which is understood to read on the limitation in Claim 19 wherein n glass articles are simultaneously formed in the process. Additional basis for the limitations set forth in claim 1 can be found in the disclosure of the preferred embodiment (Column 2,

Line36 – Column 4, Line 54) as set forth in the immediate reference. However, the Northup reference fails to expressly set forth the limitation wherein the suction in the suction cup is established prior to the bottom of the blank coming into contact with the suction cup.

Northup does disclose that “the plunger extends up to a height nearly equal to the entry position of the parison” (Column 2, Lines 60-62) which is understood to mean that the parison is not in physical contact with the plunger upon its initial insertion into the blow mold. Further, the reference indicates that the vacuum engages the bottom of the parison “at the desired point in the cycle” (Column 3, Lines 1-6). Since the parison is not initially in contact with the plunger and vacuum is established at the desired point to initiate contact, it would have been obvious to one of ordinary skill in the art at the time of the invention to establish suction in the plunger prior to the bottom of the blank coming into contact with the suction cup as claimed. This would have been an obvious choice for one of ordinary skill in the art seeking to minimize processing time of a parison (e.g. avoid waiting time for the parison to flow into contact with the plunger by gravity).

Northup teaches that contact between the parison and the surfaces of the molding equipment cause the heated glass to rapidly cool which may lead to a “structural failure of the material or a stiffness that makes it unworkable”(Column1, Lines44-50). A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result; before the determination of the optimum or workable ranges of said variable might be characterized as routine

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experimentation (See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)). In the instant case, there is a direct relationship for contact time between the mold and the parison, the equipment temperature, and the rate of cooling of the parison. Therefore processing time and equipment temperature are deemed result-effective variables of glass article fabrication process. Subsequently it would be obvious to one of ordinary skill in the art to optimize the process variables which collectively contribute to the processing time and equipment temperature both as a matter of optimizing throughput for economic reasons as well as the ultimate product quality issues as indicated above. Since optimization of process timing and equipment temperature would be undertaken through routine experimentation and in the absence of any unexpected results, the claims 3, 4, 5, 6, 8, 12, 13 are deemed obvious over the prior art.

Regarding claims 2 and 9, it would be obvious to one of ordinary skill in the art to optimize both the level of vacuum generated in the plunger and the separation distance between the plunger and the bottom of the parison. It would be obvious to optimize the vacuum level between a minimum level which provides enough suction to "grab" the parison and a maximum level which could cause deformation of the bottom of the parison on the vacuum plunger. Further, it would be obvious to optimize the separation distance for a given vacuum level to any distance which permits the vacuum in the plunger to communicate with the bottom of the parison. These variables would decrease or eliminate the time needed for the parison to gravity flow into contact with the plunger.

With respect to claim 10, it would be obvious to one of ordinary skill in the art to maintain the molten gob of glass at any temperature in the working temperature range of a given glass composition.

With respect to Claims 14 and 15, figure 1 clearly shows that bottom of the parison has a concave geometry and it would be obvious to one of ordinary skill to adjust the depth of this indent in order to optimize the vacuum interface between the parison and the plunger.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Northup (US 4,276,073) as applied to claim 1 above, and further in view of Northup (4,507,136). '073 fails to teach that the stretching stroke for the suction cup decreases with increasing distance from the finishing molds from the pivot axis of the rocker mechanism. Reference '136 teaches a parison drawing machine which elongates a molded parison blank prior to finishing in a blow mold. The reference indicates that when drawing a parison, "the thicker, hotter part will stretch more than a thinner part because it is less viscous than the thinner part. As it becomes thinner, under the action of the drawing force, it loses temperature and gains viscosity" (Column 2, Line 66-Column 3, Line 5). In light of the '136 disclosure, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Northup '073 invention to decrease the draw rate as the parison elongation process proceeds. This would have been an obvious modification in order to avoid damaging the drawn parison as it becomes thinner, cooler and thus more viscous through the drawing process.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references are set forth to establish the current state of the art related to the applicants invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Lazorcik whose telephone number is (571) 272-2217. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLL


ERIC HUG
PRIMARY EXAMINER